

1. An image pickup element comprising:
a plurality of photodetectors each having a color
filter array;

horizontal direction selection means for selecting
the arbitrary basic block in a horizontal direction;
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2. An element according to claim 1, wherein a region of the basic block equals a region of a basic pattern of repeated patterns of the color filter array.

20 3. An element according to claim 1, wherein a region of the basic block equals a region obtained by equally dividing a basic pattern of repeated patterns of the color filter array.

25 4. An element according to claim 1, wherein said
output means comprises selection means for selecting
the basic block in the horizontal direction to output

5. An element according to claim 4, wherein said output means comprises selecting the basic block in the horizontal direction from said photodetectors.

6. An element according to claim 4, wherein said output means comprises selecting the basic block in the horizontal direction from said photodetectors.

7. An element according to claim 4, wherein said output means comprises selecting the basic block in the horizontal direction from said photodetectors in the horizontal direction with a time delay.

8. An element according to claim 4, wherein said output means comprises selecting the basic block in the horizontal direction from said photodetectors in the horizontal direction with a time delay.

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said output means comprises storage means for storing the outputs from said photodetectors selected by said vertical direction selection means with a time delay and parallelly outputting signals from said photodetectors in the basic block.

said output means comprises storage means for storing the outputs from said photodetectors selected by said vertical direction selection means with a time delay and parallelly outputting signals from said photodetectors in the basic block.

10. An element according to claim 1, wherein the color filter array comprises a filter for transmitting only red light within a visible light range, a filter for transmitting only green light within the visible light range, and a filter for transmitting only blue light within the visible light range.

11. An element according to claim 2, wherein the color filter array comprises a filter for transmitting

only red light within a visible light range, a filter for transmitting only green light within the visible light range, and a filter for transmitting only blue light within the visible light range.

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12. An element according to claim 3, wherein the color filter array comprises a filter for transmitting only red light within a visible light range, a filter for transmitting only green light within the visible light range, and a filter for transmitting only blue light within the visible light range.

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13. An element according to claim 1, wherein the color filter array comprises a filter for shielding only red light within a visible light range, a filter for shielding only green light within the visible light range, a filter for shielding only blue light within the visible light range, and a filter for transmitting only green light within the visible light range.

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14. An element according to claim 2, wherein the color filter array comprises a filter for shielding only red light within a visible light range, a filter for shielding only green light within the visible light range, a filter for shielding only blue light within the visible light range, and a filter for transmitting only green light within the visible light range.

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15. An element according to claim 3, wherein the color filter array comprises a filter for shielding only red light within a visible light range, a filter for shielding only green light within the visible light range, a filter for shielding only blue light within the visible light range, and a filter for transmitting only green light within the visible light range.

16. An image pickup device comprising:

(A) an image pickup element including;

(a) a plurality of photodetectors each having a color filter array;

(b) vertical direction selection means for selecting in a vertical direction an arbitrary basic block having at least two of said plurality of photodetectors;

(c) horizontal direction selection means for selecting the arbitrary basic block in a horizontal direction; and

(d) output means for parallelly outputting outputs from said photodetectors in the arbitrary basic block selected by said vertical direction selection means and said horizontal direction selection means;

(B) block storage means for storing a plurality of outputs from said image pickup elements in units of basic blocks; and

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(C) interpolation means for calculating an interpolated pixel on the basis of an output from said block storage means.

5 17. A device according to claim 16, wherein said
block storage means and said interpolation means are
formed on one semiconductor chip together with said
image pickup element.

10 18. A device according to claim 16, further comprising signal processing means for performing at least one of color gain adjustment, low-frequency filtering, and edge enhancement.

15 19. A device according to claim 18, wherein said
block storage means, said interpolation means, and said
signal processing means are formed on one semiconductor
chip together with said image pickup element.

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